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Classical and quantum parallelism in the quantum fingerprinting method

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Abstract

In this paper we focus on how the classical and quantum parallelism are combined in the quantum fingerprinting technique we proposed earlier. We also show that our method can be used not only to efficiently compute Boolean functions with linear polynomial presentations but also can be adapted for the functions with nonlinear presentations of bounded "nonlinearity". © 2011 Springer-Verlag Berlin Heidelberg.

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